

DRAFT ver 1.2

NATIONAL ENVIRONMENTAL PUBLIC HEALTH PERFORMANCE
STANDARDS

LOCAL ENVIRONMENTAL PUBLIC HEALTH SELF-ASSESSMENT
INSTRUMENT

May 2007

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FOREWORD

This foreword provides an introduction to the National Environmental Public Health Performance Standards (NEnvPHPS) and the Local Environmental Public Health Self-Assessment Instrument (Local Instrument). The primary goal of the NEnvPHPS is to promote continuous capacity improvement of Local Environmental Health Programs (LEHPs). The implementation of the NEnvPHPS is intended to foster environmental health excellence at the state, tribal, local, and national levels through the following three goals:

- Build individual agency capacity to provide the ten Essential Environmental Health Services (EssEnvHS)
- Build community accountability for environmental health services
- Build consistency of services across agencies

FREQUENTLY ASKED QUESTIONS

What are the National Environmental Public Health Performance Standards (NEnvPHPS)?

- A set of ten standards modeled after the National Public Health Performance Standards (NPHPS), and based on the ten EssEnvHS.
- Each section of the document addresses one of the standards and includes indicators and questions that can be asked to determine to what extent the standards are met.

Why do we need standards?

The National Public Health Performance Standards (NPHPS), after which the NEnvPHPS were modeled, have been in use for several years, and are currently under revision. While they can be used to assess environmental health programs and agencies, research has found that there is not always a good correlation between the capacity of the public health system and the capacity of the environmental health agency. The NEnvPHPS were developed to address this gap and are considered to be a companion document to the NPHPS.

Who should use the standards?

Local environmental health or public health systems, agencies, or programs that wish to pursue excellence through identification of gaps in their capacity to perform the essential environmental health services and action plans to address those gaps. Tribal and state agencies can also modify the document for their needs.

How can we use the standards?

The NEnvPHPS can be used in several ways. They can be used to:

- Assess the capacity of a state, tribal, or local jurisdictions to perform the EssEnvHS.
- Identify gaps in the capacity to perform the EssEnvHS.
- Develop an action plan to address the identified gaps and barriers to meeting the standards.
- Educate and train new and existing staff about the role of environmental health in preventing disease and reducing hazards, and the infrastructure necessary to fulfill that role.

What results can we expect from implementing the NEPHPS?

Results will depend on what you choose to do with the information you obtain from completing the instrument. Meeting the standards means:

- You will have a better understanding of the needs of the community.
- You will have a process in place to measure accomplishment.
- You will have engaged the community in establishing priorities.
- You will learn about the importance of evaluation and improving the environmental health system.
- Competencies to perform the essential services will be better identified.
- You will be able to approach decision-makers with information about what it will take to improve the environmental health system.

What informational resources are available to our agency to support our journey to excellence?

There are several resources available.

- PACE-EH for use with developing community involvement.
- Best practices for monitoring health status and environmental factors.
- Core competencies for the practice of environmental health.

A tool kit is currently being developed that will list resources available to support improvement in each of the ten EssEnvHS.

BACKGROUND

The NEnvPHPS were developed to address two issues. First, there was a need to clearly define standards for environmental health, whether it is a system or an individual program, that when met will enable improvement in health and reduction in risk. Traditionally, environmental health has focused more on the number of activities performed and less on what was accomplished by completing the activities (i.e., improved health; the elimination or reduction of hazards). The NEnvPHPS are based on a framework of the Essential Environmental Health Services (EssEnvHS) which identify the necessary components of local environmental health programs

Second, while the NPHPS address some environmental health activities, it is unclear if a strong public health system, as measured by the NPHPS, means there is a strong environmental health program. In other words, how good are the NPHPS at measuring the capacity of a local environmental health program to perform the essential environmental health services? Recent research indicates that there is little if any correlation between the NPHPS and the NEnvPHPS. It was determined that a separate set of NEnvPHPS would be a valuable companion instrument to the NPHPS, and would provide important additional information for strengthening environmental health services.

Value of the NEPHPS

By using the environmental health performance standards to identify and benchmark superior performance and to develop an action plan to improve capacity, LEHPs will be

better equipped to assess and improve the delivery of the EssEnvHS and achieve improvements in community environmental health.

LEHPs can demonstrate their leadership to develop a comprehensive environmental health program by advocating with partners in environmental health (other state environmental agencies, non-profit organizations, academic institutions) for policy changes that improve community environmental health. Use of the Local Instrument can result in stronger connections between environmental and public health partners, greater awareness of the interconnectedness of environmental health activities, and the identification of program strengths and gaps that can be addressed through improvement efforts

Acknowledgement

The Local Instrument was developed in collaboration with an expert panel of environmental health managers and practitioners. The panel of experts who contributed to the creation of this instrument includes:

- Gerry Barron, MPH, Associate Professor, Department of Health Policy and Management, University of Pittsburgh Graduate School of Public Health and former Deputy Director, Allegheny County Health Department, Pittsburgh, PA
- Rob Blake, MPH, Director, Environmental Health, Georgia Division of Public Health
- CAPT Patrick O. Bohan, Ph.D., MS, MSEH, USPHS (Ret), Assistant Professor, East Central University, Ada, OK (principal investigator)
- Scott Holmes, MPH, Director, Environmental Health, Lincoln-Lancaster County, NE
- Sarah Kotchian, EdM, MPH, PhD, Research Assistant Professor, Institute of Public Health, University of New Mexico
- Carl Osaki, MPH, Clinical Associate Professor, School of Public Health and Community Medicine, University of Washington

- Ken Sharp, Bureau of Environmental Health Services, Iowa Department of Public Health
- Pete Thornton, MPH, Director, Environmental Health, Volusia County, FL
- Chuck Treser, MPH, Senior Lecturer, School of Public Health and Community Medicine, University of Washington

Members of the Environmental Health Services Branch within the National Center for Environmental Health have been valuable partners and advisors throughout this project. Dr. Sharunda Buchanan, former Environmental Health Services Branch Chief and current Director, Division of Emergency and Environmental Health Services, and CAPT John Sarisky, Senior Environmental Health Scientist, have provided support and excellent suggestions and commentary on this project.

NPHPS

The NEnvPHPS are being developed in cooperation with the NPHPS program. We envision the NEnvPHPS to be a supplement to the NPHPS. This will allow jurisdictions to complete the NEnvPHPS along with the NPHPS or apart from them.

INSTRUMENT USE

The NEnvPHPS can be used in several ways.

- They can be used as a self-assessment tool from which to complete a gap analysis aimed at improving capacity to perform the essential environmental health services. An action plan can be a good way of approaching this.
- The NEnvPHPS can also be used as a tool for teaching new or existing staff who may be unfamiliar with an environmental public health system. The standards provide an excellent description of what is meant by performing the essential services of environmental health.
- Data from the completed instruments can be aggregated on a national level in order to identify gaps in the national capacity.
- Results from a self-assessment can be used to justify continued or expanded services and to provide support for training or adding staff.

Essential Environmental Health Services

1. **Monitor** environmental and health status to identify and solve community environmental health problems.
2. **Diagnose and investigate** environmental health problems and health hazards in the community.
3. **Inform, educate, and empower** people about environmental health issues.
4. **Mobilize** community partnerships to identify and solve environmental health problems.
5. **Develop policies and plans** that support individual and community environmental health efforts.
6. **Enforce** laws and regulations that protect health and ensure safety.
7. **Link** people to needed environmental health services and assure the provision of environmental health services when otherwise unavailable.
8. **Assure** a competent environmental health workforce.
9. **Evaluate** the effectiveness, accessibility, and quality of personal and population based environmental health services.
10. **Research** for new insights and innovative solutions to environmental health problems and issues.

The EssEnvHS provide the fundamental framework for the Local Instrument by describing the environmental health services that should be provided in all communities. The EssEnvHS were derived from the **Essential Public Health Services** and used as a working definition of environmental health and a guiding framework for the responsibilities of local environmental health programs. The original **Essential Public Health Services** were developed by the Core Public Health Functions Steering Committee in 1994 and later used as a guide for developing the **National Public Health Performance Standards (NPHPS)**. The **Essential Public Health Services** were developed to describe the core functions of public health as identified in the 1988 Institute of Medicine Report *The Future of Public Health* - Assessment, Policy Development, and Assurance.

About the Local Assessment Instrument

The Local Instrument is divided into ten sections – one for each EssEnvHS. Each section begins with a description of the standard for that EssEnvHS. The standard describes optimum performance. The instrument can be used at various levels of environmental health. Those completing the instrument can consider an entire environmental health system that would include representation from all of the governmental and non-governmental agencies having responsibility for environmental health. The instrument could also be used for a local environmental health agency as might be found in a local health department or used for a particular programmatic area such as food safety.

Indicators follow each of the standards. The indicators identify the components for each standard. The completion of all of the indicators for a standard should result in meeting that particular model performance standard. Each indicator is followed by an assessment question that serves as a measure of that indicator. There are five possible responses associated with each of the questions.

As each question is discussed, the response that best fits the current level of activity should be determined. The responses to the assessment can and perhaps should serve as a benchmark for future improvements. It is best to be “brutally” honest with responses. If a partial service is provided then it should be indicated as such. The response options are described below.

Response options are:

- **FULLY MET** refers to 100% of the activity described within the question is met.
- **SUBSTANTIALLY MET** refers to greater than 50%, but less than 100% of the activity described within the question is met.
- **PARTIALLY MET** refers to greater than 25%, but not more than 50% of the activity described within the question is met.

- **MINIMAL ACTIVITY** refers to greater than 0% and no more than 25% of the activity described within the question is met.
- **NO ACTIVITY** refers to none of the activity described within the question is met.

INSTRUCTION for COMPLETING the LOCAL ASSESSMENT INSTRUMENT

1. Determine at what level the instrument will be completed (system, agency, program) and identify the individual in the state/tribal/local health department who will be responsible for coordinating the completion of the instrument.
2. Identify other members of the staff who will be involved in completing the instrument. This may include other environmental health staff, program managers, other relevant partners working in the jurisdiction, or staff from other environmental agencies. The completed instrument should reflect the input of everyone involved with providing direct environmental health services within the jurisdiction at the level chosen.
3. Those involved with completing the instrument should read the Environmental Public Health Performance Standards document before beginning work on the instrument.
4. The instrument may be completed from the standpoint of the environmental health services for which your agency (jurisdiction) has responsibility. It is acknowledged that environmental health encompasses a broad array of issues and topics that may be beyond the responsibility of your jurisdiction yet remain extremely important. Consideration should be given to how well activities are coordinated with other state and federal agencies and non-governmental organizations. A more comprehensive approach would be to consider the environmental health and protection system which includes all agencies involved with providing environmental health services.
5. Before you start completing the instrument, you should have a brief discussion of the core functions of public health (assessment, policy development, and assurance), the essential services of public health, the

Essential Environmental Health Services, the National Environmental Public Health Performance Standards (NEnvPHPS), and the value of completing the assessment.

6. After discussing the process, the next step is to complete the Local Instrument.
7. There are two parts to the instrument.
 - a. Part I requests general information about the local environmental health program. This includes some demographic information about the population served, the environmental health staff who provide the services, and budget data.
 - b. Part II includes questions that assess the capacity of the local environmental health program to provide the essential environmental health services.
8. Each standard in the document is followed by a list of indicators.
9. Each indicator is followed by an assessment question or questions. These help to serve as a level of performance. Together, all of the indicators constitute completion of the performance standard.
10. There are five possible responses to each question. As you discuss each question, you should determine the response that best fits the current level of activity. Do not leave a response blank. Respond to the best of your ability and understanding of the program.
11. Responses should be placed on the separate questionnaire. Be sure to make a copy of the completed form for your records.
12. Results from the completed instruments can be used in many ways. Results can be presented categorically or numerically. Each completed instrument will have eleven scores (range = 0 – 100). There will be a score for each of the ten categories matching the ten EssEnvHS and an overall score. Another method of presentation is to put the results for each of the eleven into one of the five categories. This activity is not intended to compare one program with another.

FUTURE USE of THE INSTRUMENT

These standards are intended to be used to improve the capacity of local environmental health programs to perform the EssEnvHS. The longer-term plan is to collect national data about the capacity of local environmental health programs to perform the essential environmental health services. National data will identify strengths and gaps in the environmental public health system. This information can then be used to develop activities to address the gaps and ultimately improve the capability of LEHPs to perform the EssEnvHS. The Local Instrument could then be applied a second time to measure progress in improving the environmental public health system. In addition, core competencies can also be integrated with the standards. This will help with the preparation of the environmental public health workforce.

TERMINOLOGY

Standards and Indicators

The National Environmental Public Health Performance Standards are intended to reflect an optimal level of performance for local programs. Each **standard** describes what should exist at the local level in order for a local jurisdiction to optimally provide the essential environmental health service. The **indicator** is a state of being within the organization that needs to exist to help meet the standard. The **indicators** are construed as components of a standard. If a jurisdiction meets all of the indicators for a **standard** then there is some level of assurance that the **standard** is being met.

A description of terminology follows:

- The *Essential Environmental Health Services*: these are what local environmental public health programs need to be doing to have an effective program. The *Essential Environmental Health Services* need to be taken collectively. A jurisdiction needs to consider developing their program around all of the EssEnvHS and not just a few of them. The effectiveness of the

environmental health program comes from the ability to provide each of the EssEnvHS beginning with the first essential environmental health service.

- *Standard:* Defined as “a means of determining what should be”. It is a measure established by an expert panel of environmental health professionals. In this document the standards are optimal. The standard interpretation describes what needs to be in place in order to provide an essential service at an optimal level.
- *Indicator:* The indicators reflect a state of being. They are, in effect, the pieces or parts of the standard. Once achieved, the indicators collectively contribute to meeting the standard. As a state of being, they are not intended to be written or used as an objective.

ESSENTIAL ENVIRONMENTAL PUBLIC HEALTH SERVICE #1: Monitor Environmental and Health Status to Identify and Solve Community Environmental Health Problems

Standard #1:

Environmental and public health information systems, assessment skills and tools are in place. The information system is continuously maintained and enhanced. An accurate assessment of the community's environmental health status is periodically performed. The monitoring system provides information that can be used to establish priorities, direct resources, and provide a baseline against which improvement is measured. This includes:

- Identification of community environmental health problems;
- Identification of the environmental factors contributing to environmental health problems and data on environmental quality (air quality, water quality);
- Determination of the environmental public health services needed to match identified problems; and,
- Utilization of appropriate methods and technology, such as geographic information systems, to interpret and communicate data to diverse audiences.

Guidance:

The community environmental health profile (CEHP) includes broad-based surveillance data and measures related to environmentally-related illness, disease, and injury and environmental health risks at individual and community levels including such information as: demographic and socioeconomic characteristics; environmental indicators (such as air quality data, drinking water quality); environmental health indicators (such as frequency of critical violations from food inspections, underground storage tanks); death, illness, and injury; infectious disease. If a jurisdiction, because of its rural demographics or small population, has small numbers of cases it may be necessary to use a regional approach to define the level of environmental illness. The CEHP displays information about trends in environmentally-related illness along with associated risk factors, as well as about population disparities in health status and hazard exposure. Local measures are compared with peer, state, and national benchmarks. Data and information are displayed in multiple formats for diverse audiences, such as the media and community-based organizations. Data included in the community environmental health profile are accurate, reliable, and consistently interpreted according to the science and evidence-base for public health practice. Data are prepared and presented in such a way that they are easily understood by policy makers and the public. The community can use the CEHP to prioritize the environmental health issues that will be addressed through strategic planning and action, to allocate resources, and to monitor environmental health improvements over time

Core Indicators:

Indicator 1.1: An information management plan is in place that includes the identification, collection, storage, analysis and communication of environmental health data

A local set of core measures that reflect the community status of environmentally-related illness, disease, injury and environmental factors is used as the basis for continuous monitoring of the environmental health status of the community. A population-based community environmental health profile (CEHP) includes health and environmental data. The environmental data may include environmental indicators, risk factors, environmental quality, or critical violations and a general description of the environmental quality of the community. This set of core measures tracks data over time to signal changes in priority environmental health issues. The jurisdiction identifies source(s) of the necessary data and contact information for obtaining the data. The jurisdiction develops and implements a data collection plan to help with the CEHP process. Jurisdiction analyzes and prepares the data for internal review and for review by policy makers and the general public. Jurisdiction presents data on environmentally related illness and environmental factors in formats that allow for clear communication and interpretation by end users, especially the public and policy makers. Such formats include graphed trend data that allow for comparisons over time by relevant variables.

- 1.1.1 Have environmental health data reflecting the community status of environmentally-related illness, disease, injury, and environmental factors been collected?*
- 1.1.2 Are environmental health data analyzed?*
- 1.1.3 Are environmental health data prepared in a format that allows for the clear communication and interpretation by the public and policy makers?*
- 1.1.4 Has a community environmental health profile (CEHP) using the collected data been completed?*

Indicator 1.2: Identification of Existing and Potential Environmental Health Problems and Improvements

Jurisdiction obtains benchmarks (from local, tribal, state, and national levels) against which results from the analysis are compared. Jurisdiction identifies existing and potential environmental health problems and trends in status.

- 1.2.1 Are existing and potential environmental health problems and trends identified by comparing analysis results to relevant benchmarks?*
- 1.2.2 Have the environmental factors (such as frequency of violations, air quality, and water quality) contributing to environmental health problems been identified?*

Indicator 1.3: Identification and Use of Appropriate Data Collection, Storage, Analysis, and Communication Tools

Jurisdiction identifies and uses appropriate tools for collecting, storing, analyzing and presenting data, e.g., GIS.

- 1.3 *Are appropriate tools for collecting, storing, analyzing, and presenting data identified and used?*

Indicator 1.4: Accessibility of Data and the Community Environmental Health Profile by Others

Jurisdiction makes data available in a clear and easily accessible format. Information is available in both a printed version and a web-based version. Both versions are accessible to individuals, community groups, and other organizations in a timely manner. Links to other sources of related information are provided.

- 1.4 *Is information about the community environmental health status easily available to individuals, community groups, and other organizations in a printed and web-based version?*

Indicator 1.5: Evaluation of the Information Management Plan for Appropriateness and Effectiveness

Jurisdiction identifies gaps in the information and data needs and makes appropriate changes to the information management plan.

- 1.5 *Have gaps in the information and data needs been identified resulting in appropriate changes to the information management plan?*

Indicator 1.6: Determination of the environmental public health services needed to match identified problems

- 1.6 *Are data from the information management plan used to set priorities for the local environmental health program?*

ESSENTIAL SERVICE #2: Diagnose and Investigate Environmental Health Problems and Health Hazards in the Community

Standard #2:

A system of diagnosing and investigating problems identified in the first essential service as well as routine monitoring of environmental health status (including illness, disease, injury, environmental factors, and hazards) is in place that allows the jurisdiction to respond in a timely fashion when unusual events or patterns are identified. The system includes:

- Investigations of patterns and outbreaks of environmentally-related illness, disease, injury, environmental hazards, environmental risk factors, and other environmental health threats. Results of investigations are used in recommending prevention measures.
- Preparation and response to emergencies.
- Access to a public health laboratory capable of conducting rapid screening and high volume testing.

Guidance:

Epidemiological and environmental health problem-solving techniques are used to collect data to identify environmental risk factors for environmentally-related health threats. Identification can include frequency of violations resulting from inspections of various types of facilities. Surveillance data are used to assess and analyze environmental health problems and hazards. Surveillance data are also used to examine the impact of environmental health hazards and risk factors on illness and mortality. Regarding laboratory services, the actual testing may be performed outside the traditional public and environmental health system, however, the environmental health program retains the responsibility for ensuring that proper testing and timely results are available to the community.

Core Indicators:

Indicator 2.1: Identification of Patterns Requiring a Response

A system is in place to identify patterns of environmentally-related illness, disease, injury, environmental risk factors, (such as frequency of critical food safety violations, air quality, water quality), and other environmental health hazards requiring a response.

2.1 Is an environmental health surveillance system in place that identifies patterns of environmentally-related illness, disease, injury, environmental risk factors, and other environmental health hazards that require a response?

Indicator 2.2: Investigation of Patterns and Outbreaks of Environmentally-Related Illness, Disease, Injury, and Environmental Hazards and Risk Factors

Once identified, environmental health staff investigate patterns and/or outbreaks of environmentally-related illnesses, disease, injury, environmental hazards, and risk factors. The investigation looks for the role of the environment in the outbreaks and patterns in order to develop interventions aimed at stopping the outbreak and

preventing future outbreaks or reversing the patterns of disease and environmental risk factors.

2.2 Is a process in place to investigate identified patterns and outbreaks of environmentally-related illness, disease, injury, environmental hazards, and risk factors?

Indicator 2.3: Application of Data for Prevention

Jurisdiction has a process to translate information on underlying causes or factors into prevention activities in the community.

2.3 Is a process in place to translate underlying causes or factors of environmental health problems into prevention activities?

Indicator 2.4: Current and Appropriate Technology and Consultation to Interpret and Communicate Data Established

Jurisdiction uses state-of-the-art information technology and communication systems to support surveillance and investigation activities. Jurisdiction has key environmental health staff trained in the application of epidemiology and statistics or has access to Masters and/or Doctoral level statistical and epidemiological expertise to assess, investigate, and analyze environmental health threats and hazards.

2.4 Is key environmental health staff trained in the application of epidemiology and statistics?

Indicator 2.5: Alerting the Community about EH Risks and Protection

Jurisdiction has a procedure to alert the community to possible environmental health threats and disease outbreaks.

2.5 Does a procedure exist to alert the community to possible environmental health threats and disease outbreaks?

Indicator 2.6: Local Response Plan and Role Delineation in Place

Jurisdiction has a plan that details the roles and responsibilities for the local environmental health staff in a natural disaster or other public health emergency that both stands alone and is part of the local emergency response plan. Environmental health is integrated into the all hazards emergency response plan.

2.6 Are roles and responsibilities of the local environmental health staff integrated into the all hazards emergency response plan, evaluated, and adjusted appropriately?

Indicator 2.7: Technical Expertise Roster Maintained

Jurisdiction maintains a roster of personnel with the technical expertise to respond to potential natural disasters, biological, chemical, or radiological public health emergencies.

2.7 Is a roster of personnel with technical expertise to respond to potential natural disasters, biological, chemical or radiological public health emergencies maintained?

Indicator 2.8: Laboratory Accessibility

Jurisdiction has access to approved laboratories (e.g. credentialed, licensed) capable of supporting investigations of environmental health problems, hazards, and emergencies. Jurisdiction has agreements and/or procurement process in place to access services in emergency situations.

2.8 Are agreements and/or procurement processes in place to access environmental health laboratory services in emergency situations?

ESSENTIAL SERVICE #3: Inform, educate, and empower people about environmental health issues

Standard #3:

There is a system in place to assist the community with identifying environmental health issues and setting priorities for environmental health. The system provides for:

- Communicating the status of environmental health and environmentally-related illness, disease, and injury to the community.
- Culturally appropriate environmental health information, environmental health education, and environmental health promotion activities designed to reduce environmental health risk and promote better health
- Accessible environmental health information and educational resources.
- Targeting environmental health education activities to specific groups as necessary (children, septic tank installers and owners, community water systems, etc.)
- Including measures of exposures, as well as disease outcomes (THM in water supplies, stopping food borne illness in its tracks)

Guidance:

The system recognizes the important role of communication in assessing, organizing, and prioritizing environmental health issues. Community-based environmental health education uses culturally appropriate language, materials, and processes to insure that all community members have the opportunity to become informed about and participate in environmental health decisions.

Core Indicators:

Indicator 3.1: Community Environmental Health Assessment Process (e.g., PACE-EH) to Acquire Feedback about Community Values, Priorities, and Opinions

Jurisdiction applies the *Protocol of Assessing Community Excellence in Environmental Health* or similar community assessment process to involve the community in setting environmental health priorities.

3.1 Is the community involved in setting environmental health priorities?

Indicator 3.2: Identification of Vulnerable/Sensitive Population Groups to Target with Appropriate Environmental Health Messages

Jurisdiction identifies and targets population groups that may lack the resources or knowledge about environmental health issues that may be disproportionately impacting the community. Appropriate messages are developed and delivered.

3.2 Are culturally appropriate environmental health messages developed and delivered to population groups which may lack the resources or knowledge about environmental health issues that may be disproportionately impacting the community?

Indicator 3.3: Identification of Broad Based Groups to Assist with Environmental Health Education

Jurisdiction identifies broad-based groups (such as, planning and zoning, public works, building, environmental advocacy groups, and the media) that can partner with the jurisdiction and become involved with environmental health education.

3.3 Are broad-based partners (such as planning and zoning, public works, building, environmental advocacy groups, and the media) involved with environmental health education?

Indicator 3.4: Provision of Environmental Health Information to the Community to Establish Priorities and Change Environmental Health Conditions

Jurisdiction has a plan in place for regularly updating key policy makers on the status of environmental health issues, impact of program activities, actions necessary to address emerging issues, and resource needs. Along with partners, and using appropriate resources and communication tools to address the needs of the target audience, jurisdiction provides environmental health education to assist individuals and groups in the community to establish environmental health priorities and use knowledge to change conditions affecting environmental health. Culturally appropriate language, materials, and processes insure all community members have the opportunity to become informed. Measures of exposure (e.g., elimination of THMs, stopping a foodborne outbreak) are included in the updates.

3.4 Are key policy makers regularly updated on the status of environmental health issues, the impact of program activities, the actions necessary to address emerging issues, and the resource needs?

POLICY DEVELOPMENT

ESSENTIAL SERVICE #4: Mobilize community partnerships to identify and solve environmental health problems

Standard #4:

The comprehensive identification and effective solution of environmental health problems can best be accomplished with the assistance or input from stakeholders within the community. Providing the community with information about the status of environmental health (both environmental and health) and then soliciting input from the community is essential in addressing environmental health issues in a comprehensive manner. Such a system includes:

- Identifying potential stakeholders who contribute to or benefit from environmental health, and increase their awareness of the value of environmental health.
- Building coalitions to draw upon the full range of potential human and material resources to improve the community's environmental health.
- Convening and facilitating partnerships among groups and associations (including those not typically considered to be environmental health-related) in undertaking defined environmental health improvement projects.

Guidance:

Community partnerships describe a continuum of relationships that foster the sharing of resources and accountability in undertaking community environmental health improvement. For example, the jurisdiction may partner with the several groups interested in food safety that would include restaurant owners, producers and consumers to address concerns particular to the food protection program.

The jurisdiction establishes and implements a process aimed at assessing and improving environmental health in the community. Environmental health agencies may convene or facilitate the collaborative process. The multiple levels of relationships among public, private, or nonprofit institutions have been described as 1) *networking*, exchanging information for mutual benefit; 2) *coordination*, exchanging information and altering activities for mutual benefit and to achieve a common purpose; 3) *cooperation*, exchanging information, altering activities, and sharing resources for mutual benefit and to achieve a common purpose; and 4) *collaboration*, exchanging information, altering activities, sharing resources, and enhancing the capacity of another for mutual benefit and to achieve a common purpose.

Multi-sector collaboration can be defined as: a voluntary strategic alliance of public, private, and nonprofit organizations to enhance each other's capacity to achieve a common purpose by sharing risks, responsibilities, resources, and rewards. Multi-sector partnerships for community environmental health assessments exist in some communities or can be developed as outlined in the Protocol for Assessing Community Excellence in Environmental Health (PACE-EH). Constituents of the jurisdiction include all persons and organizations that directly contribute to or benefit from environmental health. These may include members of the public served by the jurisdiction, the

governmental bodies it represents, and other health, environmental, and non-health-related organizations in the community.

Core Indicators:

Indicator 4.1: Identification of Stakeholders and Partners

Jurisdiction has a formal process to identify key stakeholders and partners for community environmental health in general (e.g., improved environmental health conditions at the community level) or for specific environmental health concerns (e.g., drinking water, vector-borne disease, food safety). The jurisdiction establishes and maintains a comprehensive directory of community organizations and agencies with an interest in environmental health services.

4.1 Are key stakeholders for environmental health identified?

Indicator 4.2: Comprehensive Approach to Assessing and Improving Environmental Health

The jurisdiction establishes and maintains community partnerships to assure a comprehensive approach to assessing and improving environmental health in the community. Partnerships with other government agencies and the private sectors are established and maintained in order to address existing and emerging environmental health issues. Focus is placed on those environmental health issues that are a top priority based on the community environmental health assessment and the strategic plan.

4.2 Are partnerships with other government agencies and the private sector used to focus on issues that are a top priority for improving the environmental health of the community?

Indicator 4.3: Involving the Community

The jurisdiction employs one or more formal methods to involve the community (stakeholders/interested parties) in key decisions and policy development.

4.3 Does the jurisdiction employ a formal method to involve the community in key decisions and policy development for environmental health issues?

Indicator 4.4: Innovative Partnerships with Organizations and Agencies

The jurisdiction creates partnerships with other organizations and government agencies (such as professional associations, trade associations, advocacy groups and environmental protection/quality agencies, universities) that will help to enhance the effectiveness of local environmental health and protection services.

4.4 Do partnerships exist with organizations (professional associations, trade associations, universities) that will help enhance program effectiveness?

ESSENTIAL SERVICE #5: Develop policies and plans that support individual and community environmental health efforts

Standard #5:

The jurisdiction establishes environmental health policy and develops and maintains an environmental health system that provides quality environmental health services. A strong local environmental health program is dynamic and changes to meet emerging and re-emerging threats. The jurisdiction works well with its community partners to develop necessary policy and program resources. Characteristics of this standard include:

- An effective governmental presence at the local level.
- Development of policy that protects the health of the public from environmental factors and the ecological balances important to human health and that guides the practice of environmental health within the community.
- Systematic community-level and state-level planning for environmental health improvement and emergency response and preparedness in all jurisdictions.
- Alignment of local environmental health program resources and strategies with a community environmental health improvement plan.

Guidance:

Every community must be served by a governmental environmental health entity. As the line of first defense, local governmental environmental health agencies play an especially vital role in ensuring the safety, health, and well-being of communities. The governmental environmental health entity works in partnership with the community to assure the development and maintenance of a flexible and dynamic environmental health system that provides the Essential Environmental Public Health Services. In doing this, the local governmental environmental health entity coordinates or assures the provision of quality environmental health services. In many places, the local health or environmental health department or a local branch of the state health agency serves as the local governmental environmental health entity.

As used in this instrument, the phrase “policy development” involves the means by which problem identification, technical knowledge of possible solutions, and societal values join to set a course of action. Policy development is not synonymous with the development of laws, rules, and regulations (which are the focus of Essential Service # 6). Laws, rules, and regulations may be adopted as tools to implement policy, but good policies must precede good legislation. Policy development is a process that enables informed decisions to be made concerning issues related to environmental health.

Community environmental health improvement is not limited to issues classified within traditional environmental health, but may include business, economic, housing, land use, and other community issues indirectly affecting the community’s environmental health. The community environmental health improvement process involves an ongoing collaborative, community-wide effort by the local jurisdiction to anticipate, recognize, evaluate, and address environmental health problems; assess applicable data;

inventory community environmental health assets and resources; identify community perceptions about environmental health; develop and implement coordinated strategies; develop measurable objectives and indicators; identify accountable entities; and cultivate community “ownership” of the entire process. The community environmental health improvement process provides the opportunity to develop a community-owned plan that will ultimately lead to a healthier community. The process used for this is similar to the Protocol for Assessing Community Excellence in Environmental Health (PACE-EH)

Core Indicators:

Indicator 5.1: Jurisdiction has an Environmental Health Strategic Plan that Addresses Community Needs

The jurisdiction has a strategic plan to establish the vision and mission to address prioritized needs. Strategies are in place to achieve community environmental health improvement objectives and identify entities accountable to achieve each objective. The strategic plan is used to identify goals, objectives, outcome measures, and a plan of action to address identified needs. The strategic plan is updated periodically. The plan is in line with the 2010 Healthy People objectives.

5.1 Has the jurisdiction developed a strategic plan in which environmental health improvement objectives are identified?

Indicator 5.2: Environmental Health Priorities and Issues Identified on a Periodic Basis (based on CEHP)

Advisory groups to the jurisdiction use data from the environmental health program and other sources to make recommendations to the local jurisdiction on establishing priorities for environmental health issues.

5.2. Do advisory groups recommend environmental health priorities based on accurate data from the environmental health program?

Indicator 5.3: Alignment of Local Environmental Health Program Resources

5.3 Do local environmental health program resources and strategies match the environmental health needs of the community?

Indicator 5.4: Process for Policy Review and Advocacy

The program reviews existing policies at least every two years and alerts policymakers and the public of potential unintended outcomes and consequences. Jurisdiction also advocates for prevention and protection policies and programs with particular attention to resolving environmental inequities in the population particularly for policies that affect populations who bear a disproportionate burden of mortality or morbidity.

- 5.4 *Is a process in place to review existing policies every two years and advocate for prevention and protection policies that address the identified needs of the community?*

Indicator 5.5: Identification of EH Issues of Concern that Require Advocacy or Support for Action

The program advocates for prevention and protection policies particularly for policies that affect populations who bear a disproportionate burden of mortality or morbidity or are particularly sensitive to some environmental health issues.

- 5.5 *Are policies advocated that affect populations bearing a disproportionate burden of mortality or morbidity or are particularly sensitive to some environmental health issues?*

ESSENTIAL SERVICE #6: Enforce Laws and Regulations that Protect Health and Ensure Safety

Standard #6:

A major focus of local environmental health programs is enforcement of laws and regulations. An important part of the enforcement activity is the periodic assessment of the value of the laws and regulations in protecting human health and the ecological balances important to human health. In addition, the education of the public and entities impacted by the various laws and regulations is important to the effectiveness of those laws and regulations. Included in this are:

- Assuring compliance with environmental health and protection laws, regulations, ordinances, and policies.
- The review, evaluation, and revision of laws and regulations designed to protect health, environmental quality, and safety to assure that they reflect current scientific knowledge and best practices for achieving compliance.
- Education of persons and entities obligated to obey or to enforce laws and regulations designed to protect health, environmental quality, and safety in order to encourage compliance.

Guidance:

The authority of the governmental organization within the local jurisdiction to enforce public health and environmental quality laws, regulations, and ordinances varies from state to state and between jurisdictions within states. In many communities, the local public health agency exercises regulatory enforcement that is delegated or contracted to it by federal, state, county, or municipal government entities. In other communities, enforcement authority may be retained by the state or delegated to one or more governmental agencies outside of the local public health agency. Some communities have local environmental health enforcement created through home rule authority.

Core Indicators:

Indicator 6.1: Evaluation of Current Laws for Appropriateness, Relevancy and Feasibility to Enforce

The jurisdiction reviews and assesses the impact of their laws, regulations, and ordinances on the environmental health of the community (this may include state or local laws). This includes scientific merit, best practices for achieving compliance, and opinions of constituents. Jurisdiction determines whether new local laws are required.

6.1 Are state or local laws, regulations, and ordinances reviewed and assessed for their impact on the environmental health of the community and a determination made whether new local laws are required?

Indicator 6.2: Environmental Health Problems and Issues not Covered by Policy or Laws

The jurisdiction identifies gaps in public health and environmental laws, regulations, ordinances, or policies for problems and issues that can only be addressed through these means.

6.2 Are gaps identified in public health and environmental laws, regulations, ordinances, or policies?

Indicator 6.3: Informing and Educating the Public of Laws and Regulations

The jurisdiction informs and educates individuals, organizations, and regulated entities of the meaning and purpose of public health and environmental quality laws, regulations, and ordinances.

6.3 Are individuals, organizations, and regulated entities informed and educated of the meaning and purpose of public health and environmental quality laws, regulations, and ordinances?

Indicator 6.4: Modification of Laws and Regulations (policy development function)

The jurisdiction participates in the modification of existing laws, regulations, and/or the formulation of new laws, regulations, and ordinances designed to assure and improve the public's health and the quality of the environment that may impact human health by drafting or providing technical assistance for drafting proposed legislation, regulations, and ordinances.

6.4 Is there participation by the jurisdiction in the modification and/or formulation of new laws, regulations, and ordinances designed to assure and improve the public's health and the quality of the environment that may impact human health?

Indicator 6.5: Assessing the Timeliness and Appropriateness of Compliance Activities

The jurisdiction assures that all its enforcement activities are conducted in a timely manner in accordance with laws, regulations, and ordinances.

6.5 Are enforcement activities conducted in a timely manner in accordance with laws, regulations, and ordinances?

Indicator 6.6: Evaluation of the Effectiveness of Compliance Activities

The jurisdiction evaluates the compliance and responsiveness of regulated organizations and entities and makes appropriate adjustments to its program. Those staff members charged with enforcement are evaluated on their knowledge and effectiveness. Training is provided to staff members to encourage compliance.

6.6 Is the compliance and responsiveness of regulated organizations and entities evaluated and appropriate adjustments made to the program?

ESSENTIAL SERVICE #7: Link people to needed environmental health services and assure the provision of environmental health services when otherwise unavailable

Standard #7:

As part of the public health assurance function, there is a need for the local jurisdiction to understand the entire environmental health system and be sure all constituents have equal access. The public is not always aware of which agency has responsibility for the various environmental health activities. Inevitably, members of the public will contact local environmental health programs with questions or requests for services that are the responsibility of another agency. In addition, there are populations who may have difficulty with obtaining services. Local environmental health programs can demonstrate leadership by anticipating some of these issues. In some instances, environmental health responsibilities have been fragmented and assigned to several different agencies. Major considerations for this service include:

- Identifying populations with limited access or barriers to environmental health services.
- Identifying environmental health service needs of populations with limited access or barriers to a coordinated environmental health system.
- Assuring the linkage of people and the community to appropriate environmental health services through coordination of services and development of interventions that address barriers to service (e.g., culturally and linguistically appropriate staff and materials).

Guidance:

The LEPHP supports and coordinates partnerships and referral mechanisms among the community's environmental health and protection programs to optimize access for the entire population to needed environmental health services. The LEPHP seeks to create innovative partnerships with other organizations—such as professional associations, trade associations, and advocacy groups—that will help to enhance the effectiveness and accessibility of local environmental health and protection services.

Core Indicators:

Indicator 7.1: Agencies and Resources that have the Responsibility or Capacity to Address Environmental Health Needs Not Provided by the Local Environmental Health Authority Identified

The jurisdiction assures the linkage of individuals and the community to environmental health services by periodically meeting with other agencies responsible for environmental health and protection to agree on roles and responsibilities to provide needed environmental health services to the entire community which includes populations who may encounter barriers (such as language and culture).

7.1 Is the linkage of individuals and the community to environmental health and protection services (such as DEQ) assured?

Indicator 7.2: Directing Constituents to Needed Services

The jurisdiction develops referral mechanisms among the community's environmental health and protection programs to optimize access to needed environmental health services by constituents.

7.2 Is a referral mechanism in place to optimize access to needed environmental health services by all constituents?

Indicator 7.3: Populations with Barriers to Environmental Health Service Identified

The program identifies populations with limited access or barriers to a coordinated environmental health system. The barriers to service may include language or culture.

7.3 Are populations with limited access or barriers to a coordinated environmental health system identified?

Indicator 7.4: Address Needs of Populations with Limited Access or Barriers

The program provides services to address identified needs by assuring a program delivery system that is timely and responsive to its constituents. For example, outreach to populations with barriers to access or adjusting work hours to meet the needs of the population. Program coordinates activities in areas of environmental health for which they do not have responsibility with those agencies/systems that do.

7.4 Does the program coordinate their activities in areas of environmental health for which they do not have responsibility with those agencies that do in order to assure a program delivery system that is timely and responsive to all constituents?

ESSENTIAL SERVICE #8: Assure a competent environmental health workforce

Standard #8:

It is vital to have a well prepared environmental health workforce which has a fundamental understanding of environmental health and public health and which has the capacity to carry out the essential environmental public health services. A periodic assessment of the workforce is conducted to determine required workforce numbers and training needs. The number of environmental health professionals required and the necessary competencies for the workforce are elements that should be included in recommendations coming from an assessment. The competency of others working in environmental health-related activities is important. Fulfilling the service includes:

- Assessment of the workforce to meet community needs for environmental health services.
- Maintaining environmental health workforce standards, including efficient processes for licensure/credentialing of professionals and incorporation into personnel systems of core public health competencies needed to provide the Essential Environmental Public Health Services.
- Adoption of continuous quality improvement and life-long learning programs for all members of the environmental health workforce, including opportunities for formal and informal public health and environmental health leadership development.
- Plan for recruitment and retention of the workforce
- Plan for improving the competency of non-governmental workers such as private environmental health workforce, septic and water well contractors, food service managers, and others

Guidance:

Workforce assessment is the process of determining the competencies, skills, and knowledge; categories and number of personnel; and, training needed to achieve community environmental health goals. It is a community process that includes the identification of those available to contribute to the provision of the essential environmental public health services and the particular strengths and assets that each brings. Workforce assessment includes the projection of optimal numbers and types of personnel and the formulation of plans to address identified workforce shortfalls or gaps. Particular attention needs to be paid to diversification of the workforce to reflect the diversity of the community it serves.

Environmental health workforce qualifications include certifications, licenses, and education required by law or established by local, state, or federal policy guidelines. In addition, core and specific competencies that are needed to provide the essential environmental public health services are incorporated into personnel systems. These standards are linked to job performance through clearly written position descriptions and regular performance evaluations.

Continuing education may encompass distance learning, workshops, seminars, national and regional conferences, and other activities intended to strengthen the professional knowledge and skills of employees contributing to the provision of the Essential Environmental Public Health Services. Experienced mentors and coaches are available to less experienced staff to provide advice, assist with skill development and other needed career resources. Opportunities are available for staff to work with academic and research institutions, particularly those connected with schools of public health, accredited undergraduate and graduate programs of environmental health science, and public administration. Through these academic linkages, the environmental health workforce, faculty, and students are provided opportunities for relevant interaction, which enriches both settings.

LEPHP leadership may be provided by the local governmental public health entity, state/local environmental quality and environmental protection agencies and may emerge from the public and private sectors or the community, or may be shared by multiple stakeholders. The local governmental environmental health entity encourages the development of leadership capacity that is inclusive, representative of community diversity, and respectful of the community's perspective.

Core Indicators:

Indicator 8.1: Determining Workforce Training and Competency Needs

The jurisdiction periodically determines the competencies, composition, demographics, and size of the environmental health workforce that provides the Essential Environmental Public Health Services and uses the information to identify and address gaps in training and competence relative to the needs of the community.

8.1.1 Are gaps in workforce training and competencies relative to the needs of the community identified?

8.1.2 Are the identified gaps addressed?

Indicator 8.2: Workforce Recruitment, Development, Succession and Training Plan Created and Implemented

The jurisdiction creates a workforce plan that includes documentation of findings from the workforce determination, development of a projection of optimal workforce numbers and the types of personnel required to address environmental health needs.

8.2 Is a plan in place and implemented for workforce recruitment, development, succession and training?

Indicator 8.3: Communicating Workforce Training and Staffing Needs to Appropriate Policy Makers or Training Organizations to Address Identified Workforce Needs

The jurisdiction distributes information from the workforce assessment to community organizations, including governing bodies, advisory groups, academic institutions, and public and private agencies, for use in strategic and operational plans.

- 8.3 *Are workforce training and staffing needs communicated to key stakeholders including governing bodies, advisory groups, academic institutions, and public and private agencies?*

Indicator 8.4: Environmental Health Workforce Standards

The jurisdiction develops and maintains environmental health workforce standards that are linked to job performance through clearly written position descriptions and regular performance evaluations for individuals who deliver and/or contribute to the Essential Environmental Public Health Services. The required technical competencies are clearly defined.

- 8.4 *Are environmental health workforce standards linked to job performance through clearly written position descriptions?*

Indicator 8.5: Workforce Development Plan that Includes Competency Requirements, Performance Expectations, and Retention Incentives

The jurisdiction develops, uses, and reviews job standards and position descriptions that incorporate specific competency and performance expectations for providing the essential environmental public health services and performing the technical aspects of the position. The jurisdiction establishes requirements for licensure, registration and certification of the environmental health workforce for relevant areas of environmental health services.

- 8.5 *Is there a workforce development plan that includes competency requirements, performance expectations, and retention incentives?*

Indicator 8.6: Workforce Evaluation

The jurisdiction evaluates members of the environmental health workforce on their: demonstration of core competencies for performing their duties and responsibilities; understanding and applying the essential environmental health services; and understanding of the competencies specific to the principles of environmental health and public health. Jurisdiction encourages staff to respond to evaluations by taking advantage of continuing education and training opportunities.

- 8.6 *Is the workforce evaluated on their competencies of the principles of environmental and public health and the essential environmental health services?*

Indicator 8.7: Graduates of Accredited Programs

If accredited academic program(s) exist within the state, the jurisdiction has a policy in place to only hire graduates of accredited environmental health science programs or to give preference to graduates of these programs. Accreditation bodies include CEPH, EHAC, and ABET.

- 8.7 *Is a policy in place to hire graduates of accredited undergraduate and/or graduate programs of environmental health or public health or to give preference to graduates from those programs?*

Indicator 8.8: Leadership Succession Plan

The jurisdiction provides formal (e.g., educational programs, leadership institutes) and informal (e.g., coaching, mentoring) opportunities for leadership development for potential emerging leaders at all organizational levels of the environmental health program.

- 8.8 *Are there formal or informal opportunities for leadership development?*

Indicator 8.9: Plan to Ensure Continuing Education and Training, Including but not Limited to Life-Long Learning through Continuing Education, and Mentoring

The jurisdiction identifies continuing education and training needs and encourages opportunities for environmental health workforce development.

- 8.9 *Are there continuing education opportunities available to the workforce that addresses specific needs of the program and community?*

Indicator 8.10: Incentives for Education and Training

The jurisdiction provides incentives (e.g., improvements in pay scale, release time, tuition reimbursement) for the environmental health workforce to pursue education and training.

- 8.10 *Are there incentives for the workforce to pursue education and training (improvements in pay scale, release time, tuition reimbursement)?*

ESSENTIAL SERVICE #9: Evaluate the effectiveness, accessibility, and quality of personal and population based environmental health services

Standard #9:

There is a process in place for continually improving the environmental health program. This process includes an evaluation component that assesses the effectiveness, accessibility, accomplishment, and quality of services. The results of the evaluation should be to modify the program to address identified problems or issues. Included in this is:

- Assessing the accessibility and quality of services delivered and the effectiveness and accomplishment of programs provided.
- Providing information necessary for allocating resources and reshaping programs.

Guidance:

Using established criteria for performance, LEPHP is evaluated against specific indicators for environmental public health services. The evaluation of environmental health services is built on the analysis of environmentally-related illness, environmental indicators, and environmental risk factors known to contribute to illness and injury in order to assess program effectiveness, and to provide information to allocate resources and reshape programs. Over time, the effective program seeks to reduce exposures and risk and to improve health.

Core Indicators:

Indicator 9.1 Formal Process to Routinely Perform Program Evaluations or Assessments

The jurisdiction routinely assesses or evaluates the program to seek improvement in services and outcomes. This process includes determining the effectiveness, accessibility, accomplishment (health outcomes and/or improved environmental quality) and quality of services.

9.1 Is there a formal process to routinely perform program evaluations or assessments that measure the effectiveness, accessibility, accomplishment, and quality of services?

Indicator 9.2 Community Perceptions and Opinions about the Level, Type, and Quality of Local EH Services

Jurisdiction assesses community satisfaction with environmental health services and programs through a broad-based process, which includes stakeholders and residents who are representative of the community and groups at increased risk of environmental exposures and negative health outcomes.

9.2 Is an assessment completed that measures the satisfaction of stakeholders and residents with the services of the environmental health program?

Indicator 9.3: Evaluation of the Status of Environmental Public Health Services against the Strategic Plan and the Essential Environmental Public Health Services

The jurisdiction evaluates environmental health services against established criteria for performance, including the extent to which program goals and objectives are achieved for these services with a focus on outcome and improvement (decreased rate of illness and injury, decrease in critical factors, decrease in exposure) other than the number of services/inspections provided. Jurisdiction identifies gaps in the provision of environmental health services and takes steps to modify program activities to address the identified gaps.

9.3 Are environmental health services evaluated with a focus on health outcomes, environmental quality, environmental indicators, or frequency of violations (other than the number of inspections)?

Indicator 9.4: Action Plan to Address Needed Improvement to Services or Policies Created and Implemented

The jurisdiction modifies its strategic and operational plans to improve services and programs based on gap identification.

9.4 Is an action plan in place and implemented that addresses needed improvements to services and policies?

ESSENTIAL SERVICE #10: Research for new insights and innovative solutions to environmental health problems and issues

Standard #10:

Research that is within the local environmental health agency will help enhance solutions to identified environmental health problems. These include:

- Identification of research needs and a continuum of innovative solutions to environmental health problems including practical field-based efforts to foster change in environmental health practice and to develop best practices of environmental health services.
- Linkages with institutions of higher learning and research.

Guidance:

Research relationships can occur with schools of public health as well as with schools of environmental health science. Linkages established with other research organizations, such as federal and state agencies, associations, private research organizations, and research departments or divisions of business firms. Links should be/are established with one or more institutions of higher learning and/or research organizations to cosponsor continuing education programs.

Environmental health systems research encompasses best practices research. This research includes the examination of factors related to the efficient and effective implementation of the Essential Environmental Public Health Services (environmental health systems research) as well as the study of variables that influence environmental health service delivery (environmental health services research). The capacity to initiate or participate in timely epidemiological, environmental health policy, and environmental health systems research begins with ready access to researchers with the knowledge and skill to design and conduct research in those areas. This capacity also includes the availability of resources, facilities for analyses, and the ability to disseminate and apply research findings to improve public health practice.

Core Indicators:

Indicator 10.1: Incentive Plan to Enhance Innovation and Creativity in Job Performance or Service Delivery

Staff is enabled to identify research needs and new solutions to environmental health problems in the community by being given the time and resources to pilot test or measure the effectiveness of new or existing practices. The jurisdiction encourages employee involvement in research through such things as awards and other forms of recognition.

10.1 Are environmental health staff encouraged and supported to measure the effectiveness of new or existing environmental health services?

Indicator 10.2: System to Monitor and Apply Information or Best Practices from Other Sources

The jurisdiction researches and monitors best practice information from other agencies and organizations at the local, state, and national level. It applies information or best practices to program activities.

10.2 Are best practices for environmental health services researched or monitored and applied to program activities?

Indicator 10.3: Initiating and/or Participating in Research

Jurisdiction initiates and/or participates in research that contributes to improved environmental health system performance including best practices research.

10.3 Does the jurisdiction initiate and/or participate in research that contributes to improved environmental health system performance?

Indicator 10.4: Collaborative Research Projects

The jurisdiction partners with institutions of higher learning or research organizations to conduct research activities related to the essential environmental health services and to improvements to the practice of environmental health.

10.4 Does the jurisdiction partner with institutions of higher learning or research organizations to conduct research related to the essential environmental health services and to improve the practice of environmental health?

Glossary of Terms

Community Environmental Health Profile (CEHP)

The community environmental health profile (CEHP) includes broad-based surveillance data and measures related to environmentally-related illness, disease, and injury and environmental health risks at individual and community levels including such information as:

- Demographic and socioeconomic characteristics
- Environmental indicators (such as air quality data, drinking water quality)
- Environmental health indicators (such as frequency of critical violations from food inspections, underground storage tanks)
- Death, illness, and injury; infectious disease.

If a jurisdiction, because of its rural demographics or small population, has small numbers of cases it may be necessary to use a regional approach to define the level of environmental illness.

The CEHP displays information about trends in environmentally-related illness along with associated risk factors, as well as about population disparities in health status and hazard exposure. Local measures are compared with peer, state, and national benchmarks.

Data and information are displayed in multiple formats for diverse audiences, such as the media and community-based organizations. Data included in the community environmental health profile are accurate, reliable, and consistently interpreted according to the science and evidence-base for public health practice. Data are prepared and presented in such a way that they are easily understood by policy makers and the public. The community can use the CEHP to prioritize the environmental health issues that will be addressed through strategic planning and action, to allocate resources, and to monitor environmental health improvements over time.

The following links provide examples of CEHPs:

- The Environmental Health of Multnomah County (OR) 2003
<http://www.mchealth.org/enviroreport/>
- Environmental Health Report Card for Albuquerque and Bernalillo County 2001
http://www.bernco.gov/upload/images/environmental_health/reportcard.pdf
- East Mountain Area Environmental Quality Profile, Bernalillo County 2005
http://www.bernco.gov/upload/images/environmental_health/eastmountain_profile.pdf

EssEnvHS Essential Environmental Health Services

Environmental Health and Protection – Environmental health and protection is the art and science of protecting against environmental factors that adversely impact human health or the ecologic balances to long-term human health and environmental quality, whether in the natural or human-made environment. These factors include, but are not limited to: air; food and water contaminants; radiation; toxic chemicals; wastes; disease vectors; safety hazards; and, habitat alterations

Local Environmental Health Program (LEHP)

The Local Environmental Health Program (LEHP) may be organizationally a part of a local public health program or part of a state or tribal program that provides services at the local level.